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ABSTRACT

This survey was conducted to assess the usefulness of video tape recording and closed-circuit live television as methods of continuing medical education. Specifically, a group of physicians in Indiana were surveyed as to their use of and attitudes towards programs of the Indiana University School of Medicine which used those methods. Of 3,400 physicians who are staff members at hospitals that have access to those programs, 763 returned questionnaires which were analyzed to provide data on the demographic and professional characteristics of physicians who used those media as of part of their continuing education. It was found that physicians who use video tape or closed-circuit are typically from principal hospitals with fewer than 450 beds, spend more than 10 hours a week at the hospital, and are willing to devote some hospital-based time for education. Some characteristics were found which distinguished physicians who said they changed their behavior after watching video tape, but no distinguishing characteristics were found for physicians who said they changed behavior after using closed-circuit live television. (JK)

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ASSESSMENT OF TELEVISION AND VIDEO TAPE RECORDINGS FOR UTILIZATION IN CONTINUING MEDICAL EDUCATION

By

Charles Raymond Brown, Ph.D.

Included in this abstract is the summary and conclusions from the larger study done on the effectiveness and usefulness of the Indiana University School of Medicine WAT-21 Closed Circuit Medical Television Network and the Video Tape Network.

The project was begun in January 1972 and was completed in May 1972.

The project was completed for the Division of Postgraduate Medical Education and the Medical Education Resource Program of the Indiana University School of Medicine. The financial support for the preparation of this report was from the Public Health Service Grant No. 1-G03-RM-00043 of the Regional Medical Program Service, United States Department of Health, Education, and Welfare.

Summary

The purpose of this study was to provide an assessment of the video tape recording and closed circuit television networks of the Indiana University School of Medicine as methods of continuing medical education for a selected group of physicians in Indiana. It is anticipated that such an investigation will provide continuing medical educators, administrators and other continuing medical education faculty with additional information concerning the current practices of physicians relative to the specific methods of video tape recording and closed circuit live television programs to provide for their continued learning needs. A closely related area of interest for future comprehensive system program planning was also examined; namely, the physicians' perception of the helpfulness of various methods of continuing medical education.

Central to the study were attempts to answer five major questions. These were:

1. Are there professional and/or demographic characteristics which differentiate the physicians who elect to not utilize this particular available method for continuing medical education?

2. Are there professional or demographic characteristics which differentiate the physicians who elect to use closed circuit

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live television programs from the physicians who do not utilize this particular available method for continuing medical education?

3. Are there professional or demographic characteristics which differentiate the performance of self-perceived behavioral change attributable to viewing video tape recording programs from the physicians who do not perceive any behavioral change?

4. Are there professional or demographic characteristics which differentiate the performance of physicians on the basis of self-perceived behavioral change attributable to viewing closed circuit live television programs from the physicians who do not perceive any behavioral change?

5. Are there professional or demographic characteristics which statistically differentiate the perception of the usefulness of twenty-four continuing medical education methods which are available to various physician groups?

The population for this study has been 3,400 physicians who are active medical staff members for one or more of the fifty hospitals which currently belong to the video tape recording and/or closed circuit live television networks of Indiana University School of Medicine.

The questionnaire survey method was selected and used to obtain the individual responses from the physician population of this study who reside in various locations throughout the State of Indiana. A closed form questionnaire was designed to provide each responding physician with the opportunity to:

1. indicate various demographic characteristics related to his practice

2. indicate various professional characteristics related to his practice

3. indicate his utilization of video tape recording and closed circuit live television programs

4. indicate his motivation to seek additional information after viewing programs by these two methods

5. indicate his motivation to seek additional changes in the health care services provided by others after viewing programs by these two methods.

6. indicate the number of his own practice procedures which were changed after viewing programs by these two methods.

Several physicians and administrative individuals from medical organizations tested the questionnaire and did not express or appear to experience any difficulty in its final form.

The procedures of this study were intended to provide from the data the answers to the five questions concerned with the two methods of continuing medical education being investigated. Tables of the various relationships analyzed by these procedures are presented in Appendices E - I. The results of these procedures provided sufficient evidence to determine those demographic and professional characteristics which have appeared to be differentiating relative to the utilization and educational criteria of the study as described by the 763 respondents to the questionnaire. The findings presented in this study are not intended for generalization beyond these individuals to either all physicians of Indiana or to those physicians who were defined as the population for this study. It will be recalled that the purpose of this study was primarily an assessment of the Indiana University School of Medicine video tape recording and closed circuit live television networks as viable methods of continuing medical education.

General Findings

Seven hundred sixty-three physicians returned usable questionnaires. The typical physician who responded to the questionnaire had the following characteristics:

1. Spends more than twenty-four hours per week at his principal hospital
2. Is willing to devote about twelve per cent of this time per week for continuing medical education purposes
3. Has been in medical practice for more than nineteen years
4. Has generally limited his practice affiliations to one or two hospitals
5. His main office is located in a population area with more than 300,000 persons
6. His principal hospital provides a medical and surgical service which is not a government-owned facility
7. His principal hospital has an average size of 416 beds and is located outside of a Standard Metropolitan Statistical Area.

The significant findings summarized on the following pages have

been presented in the order that the questions were arranged and numbered. All tests of significance were conducted within the five per cent level of confidence limitation.

Utilization of Video Tape Recordings - Question 1

1. Physicians from those hospitals with less than 450 beds were more likely to utilize video tape recording programs than the physicians from the larger hospitals with more than 450 beds.

2. Physicians who practice in hospitals which have not participated in the Medical Audit Program were considerably more likely to utilize the video tape recording network for continuing medical education than physicians from hospitals which have acquired membership in the program.

3. Physicians who spend from ten to fifty hours per week at the hospital were more likely to utilize video tape recording programs than those physicians who spend fewer than ten hours or more than fifty hours at the hospital.

4. Physicians who were willing to devote time each week for continuing medical education purposes at the hospital were more likely to utilize video tape recording programs than were other physicians.

Utilization of Closed Circuit Television - Question 2

1. Physicians from hospitals with bed capacities of less than 450 beds were more likely to utilize television programming than the responding physicians from hospitals larger than 450 beds.

2. Those physicians who spend ten hours or more at the hospital were more likely to utilize television programming for continuing medical education purposes than other physicians.

3. Those physicians who indicated that they were willing to devote time for continuing medical education purposes while at the hospital were more likely to utilize television programming than other physicians who were unable to devote time each week.

Physician Motivation Attributable to Viewing Video Tape Recording Programs - Question 3

1. Physicians who have their main office outside Standard Metropolitan Statistical Areas of Indiana were more likely to be motivated to seek additional information after viewing video tape recording programs than were other physicians.

2. Physicians from the smaller hospitals with less than a 150-bed capacity were more likely to be motivated to seek both additional information and changes in the medical care services provided by others after viewing video tape recording programs than were those physicians from hospitals with more than a 150-bed capacity.

3. Physicians from hospitals without an approved postgraduate program were more likely to be seeking both additional information and changes in the medical services provided by others as a consequence of viewing the video tape recording program than were those physicians from hospitals with an approved internship or residency.

4. Physicians who were not willing to devote hospital-based time for continuing medical education were less likely to be motivated to seek both additional information and changes in the medical services provided by others than those physicians who have stated a willingness to allocate hospital time for meeting their educational needs.

5. Certified physicians were more likely to be motivated to seek additional information. In addition, non-certified physicians were more likely to seek changes in the health care services of others after viewing video tape recording programs than the other respective groups of physicians.

6. General practitioners were more likely to change their practice procedures after viewing video tape recording programs than were those physicians who were not in general practice.

7. Government hospital-based physicians were more likely to seek changes in the health care services of others after viewing the video tape recording programs than those physicians from non-government-owned facilities.

8. Physicians in practice for ten years or less were less likely to seek additional information than other physicians.

Those physicians who had thirty years or more of professional practice experience were more likely to seek changes in the health care services provided by others than physicians with less than thirty years of practice.

9. Recipients of the medical degree from schools other than Indiana University School of Medicine were more likely to seek changes in the health care services provided by others than graduates of the Indiana University School of Medicine.

Physician Motivation Attributable to Viewing Closed Circuit Television Programming - Question 4

There was not sufficient evidence to identify those professional or demographic characteristics which might have differentiated responding physicians on the basis of self-perceived behavioral change which was attributable to viewing closed circuit live television programs.

Perceived Usefulness of Continuing Medical Education Methods - Question 5

1. There was not sufficient evidence to determine those professional or demographic characteristics which might have differentiated the perception of the usefulness of twenty-four available continuing medical education methods for various physician groupings.

2. There was not sufficient evidence to determine differences between the perceived usefulness of various continuing medical education methods by those physicians who viewed video tape recording programs or closed circuit live television and those physicians who had not utilized either method.

3. The perceived usefulness of the following four available methods was ranked highest by the total respondent group:
    a. Contacts with colleagues
    b. National medical organization conferences
    c. Medical journals
    d. Medical school conferences and seminars

4. The next five methods of continuing medical education in ranked order by the physicians were, in general, an extension of the first four:
    a. Medical literature
    b. Group discussions
    c. Visiting consultants
    d. Demonstrations
    e. Library articles

5. The two continuing medical education methods of video tape recordings and closed circuit live television assessed in this study were ranked in seventeenth and twenty-first places respectively by the respondent physicians.

6. The responding physicians indicated that all available methods had some perceived degree of usefulness. They neither totally accepted nor completely rejected any particular method.

7. Some of the newer media-type methods have been perceived as being average in helpfulness and have been ranked in the first half of listing.

Conclusions

The following conclusions are derived from the analysis of the data obtained from the questionnaires of the responding physicians as they relate to the specific areas of inquiry dealt with in this study:

1. Physicians who elect to utilize video tape recordings for continuing medical education purposes are typically physicians from principal hospitals with less than 450 beds or those hospitals without a medical audit program. These same physicians spend from ten to fifty hours per week at their principal hospital and are willing to devote some hospital based time for their continuing medical education.
2. Physicians who elect to utilize closed circuit live television to assist in meeting their continuing medical education needs are typically physicians from principal hospitals with less than 450 beds, spend more than ten hours per week at this hospital and are willing to devote some hospital based time for continuing medical education purposes.
3. Physicians who are motivated into some personally perceived behavioral change attributable to using the video tape recording method of continuing medical education are typically physicians with their main office outside a Standard Metropolitan Statistical Area. Their principal hospital has less than a 150-bed capacity, does not have an approved postgraduate program and is under the control of government jurisdiction. These physicians are typically in general practice with more than ten years of medical practice and graduates of medical schools outside of Indiana.
4. Physicians who are motivated into a personally perceived behavioral change attributable to using the method of closed circuit live television display the same demographic

and/or professional characteristics as the physicians who have not personally perceived a behavioral change as a result of using this particular continuing medical education method.

5. Responding physicians have similar perceptions of the usefulness of various available methods of continuing medical education. The responding physicians use personal face-to-face spoken communication, mass media and non-personal communication as the continuing medical educational methods which they perceive as helpful.

These responding physicians have available to them but do not possess a strong perception of helpfulness for the spoken communication and mass media methods of continuing medical education.

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